

split
Work Order ID 61924-

PRELIMINARY ISSUE

Thursday, September 09, 2010 12:54:21 PM

Page 1

Item ID: D4180-1

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Gusset

Start Date: 9/9/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 9/16/2010 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan:

H

Date: 10-9-09

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D4180

PA1

100

0.00



Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: PA1

Prog Rev: PA1

2-Deburr if necessary

10-9-13

(4)

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

10-9-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61924

Thursday, September 09, 2010 12:54:21 PM



Page 2

Item ID: D4180-1

Accept



Setup Start



Revision ID: PRELIM

Item Name: Gusset

Stop



Start Date: 9/9/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 9/16/2010 Req'd Qty: 2.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120



QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00 - inspector to PA1

0.00

Done only
8/10/2013 (x4)

130



Brake NC

Brake NC

Bend as per dwg

Memo

0.00

0.00

8/10/2013 (x4)

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

- inspector to PA1
Done only
8/10/2013 (x4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61924

Thursday, September 09, 2010 12:54:21 PM



Page 3

Item ID: D4180-1

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Gusset

Start Date: 9/9/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 9/16/2010 Req'd Qty: 2.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00		⇒ MU 10/09/14		4	0		
160 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00		BR 10-9-16		④	0		
170 Packaging Packaging	Identify as per dwg & Stock Location: <u>CA</u> Memo <u>JAN</u>	0.00 0.00						25 10-09-23 ⑦	



Work Order ID 61924

Thursday, September 09, 2010 12:54:21 PM



Page 4

Item ID: D4180-1
Revision ID: PRELIM
Item Name: Gusset

Accept



Setup Start



Stop



Start Date: 9/9/2010 Start Qty: 2.00
Required Date: 9/16/2010 Req'd Qty: 2.00



Cust Item ID:
Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/09/29 *[Signature]*

U 10-9-23

POSITIVE RECALL

EFFECTIVE 10-9-08 AUTH U
RELEASED [Signature] DATE 10-09-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, September 09, 2010 12:54:25 PM

Page 1

Work Order ID: 61924

Parent Item: D4180-1

Parent Item Name: Gusset




Start Date: 9/9/2010

Required Date: 9/16/2010

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A 10.09.09 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.125  6061-T6 .125 Sheet		Purchased	No			100	sf	125.2600	0.191	0.402105			



B10-9-B

Location

Loc Qty

Loc Code

MAT21

125.26

113608

96

114352

29.26

114 350

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

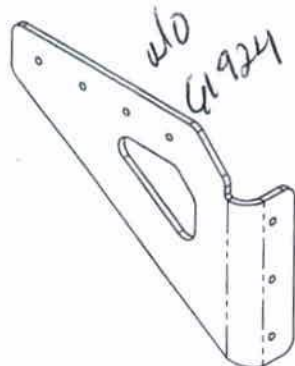
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

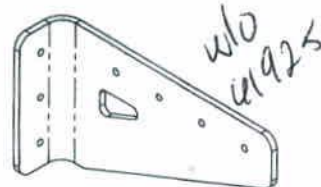
NOTE: Date & initial all entries

Koude / Bom / Ar F
 → **ADONE**

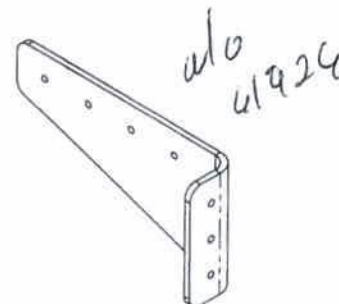
x 2 order



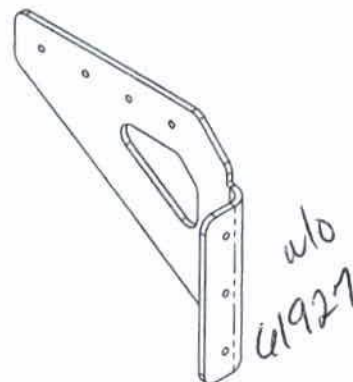
D4180-1 GUSSET



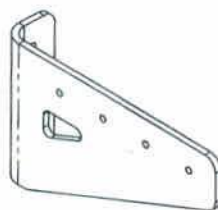
D4180-3 GUSSET



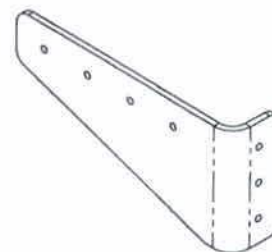
D4180-5 GUSSET



D4180-2 GUSSET



D4180-4 GUSSET



D4180-6 GUSSET

SHOP COPY
 RETURNED TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 41927
 10-909

PRELIMINARY ISSUE
 10.09.08

PA1	NEW ISSUE	MB	10.09.03
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.09.03		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D4180	REV. PA1 SHEET 1 OF 4
TITLE POD FRAME GUSSETS	SCALE NTS
COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	

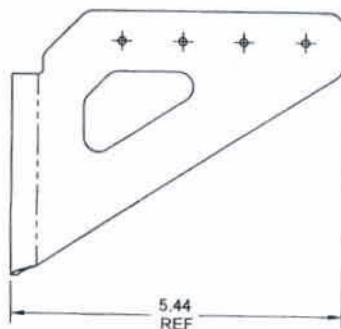
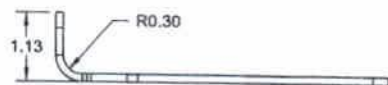
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

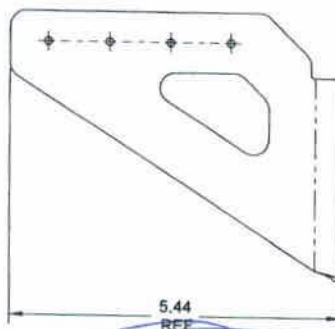
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

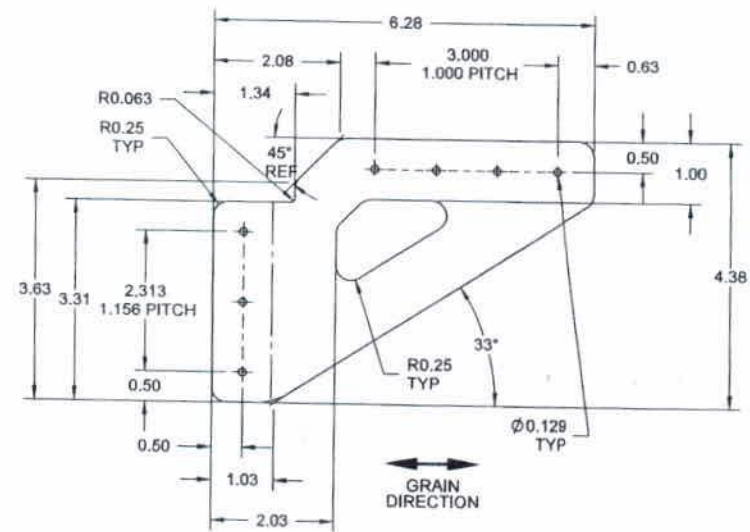
NOTE: Date & initial all entries



D4180-2 GUSSET
MAKE FROM D4180-1F



D4180-1 GUSSET
MAKE FROM D4180-1F




D4180-1F GUSSET FLAT PATTERN

PRELIMINARY ISSUE
10.09.08

NOTES:

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF. DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.19 lbs EACH

W/C 1924

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA1
MFG. APPR.		D4180	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		POD FRAME GUSSETS	NTS
DATE	10.09.03	COPYRIGHT © 2018 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT DART AEROSPACE LTD'S WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

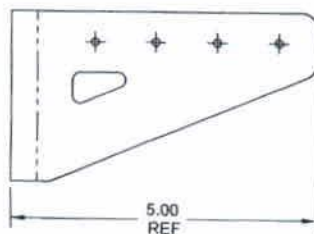
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

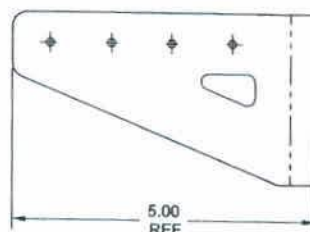
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

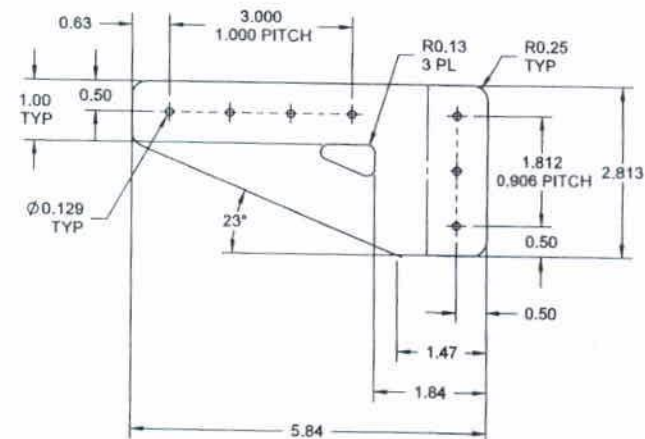
NOTE: Date & initial all entries



D4180-4 GUSSET
MAKE FROM D4180-3F



D4180-3 GUSSET
MAKE FROM D4180-3F



D4180-3F GUSSET FLAT PATTERN




w/b 6/19/24

PRELIMINARY ISSUE

10.09.08

NOTES:

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF. DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.15 lbs EACH

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA1
MFG. APPR.		D4180	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		POD FRAME GUSSETS	NTS
DATE	10.09.03	COPYRIGHT © 2018 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

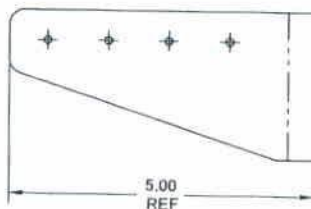
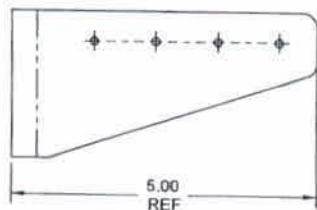
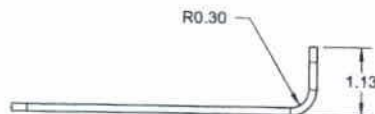
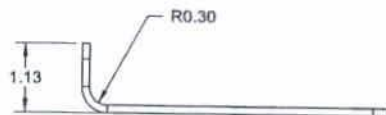
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

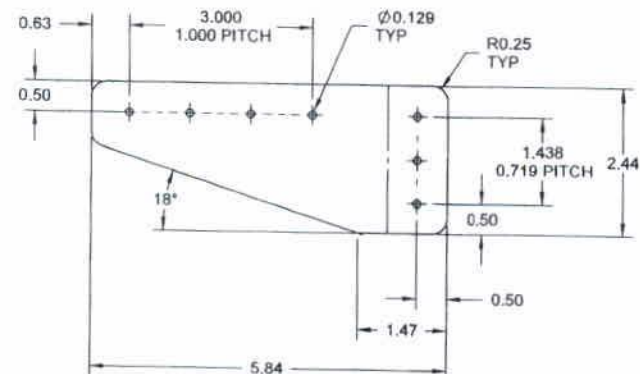
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4180-5 GUSSET
MAKE FROM D4180-5F

D4180-6 GUSSET
MAKE FROM D4180-5F



D4180-5F GUSSET FLAT PATTERN

w/061924

PRELIMINARY ISSUE
10.09.08

NOTES:

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF. DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.13 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA
MFG. APPR.		D4180	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		POD FRAME GUSSETS	NTS
DATE	10.09.03	COPYRIGHT © 2018 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRELIMINARY AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT DART AEROSPACE LTD'S WRITTEN PERMISSION.			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

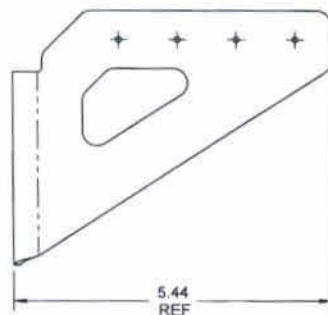
DART AEROSPACE LTD		Work Order: 6927
Description: GUSSET		Part Number: D4180-2
Inspection Dwg: D4180-2 Rev: 9A1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

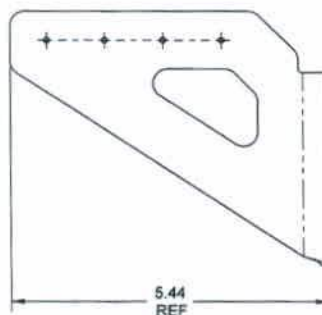
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .129	+ .005 - .001	.129	X		V 1B02	
1.34	± .030	1.337	X		V	
2.08	± .030	2.08	X		V	
3.000	± .010	3.000	X		V	
1.000	± .010	1.000	X		V	
.63	± .030	.630	X		V	
6.76	± .030	6.799	X		V	
.50	± .030	.501	X		V	
1.00	± .030	1.000	X		V	
4.38	± .030	4.383	X		V	
2.03	± .030	2.038	X		V	
1.03	± .030	1.035	X		V	
.50	± .030	.497	X		V	
2.313	± .030	2.315	X		V	
1.156	± .010	1.159	X		V	
3.31	± .030	3.316	X		V	
3.63	± .030	3.639	X		V	
.125	± .010	.123	>		V	

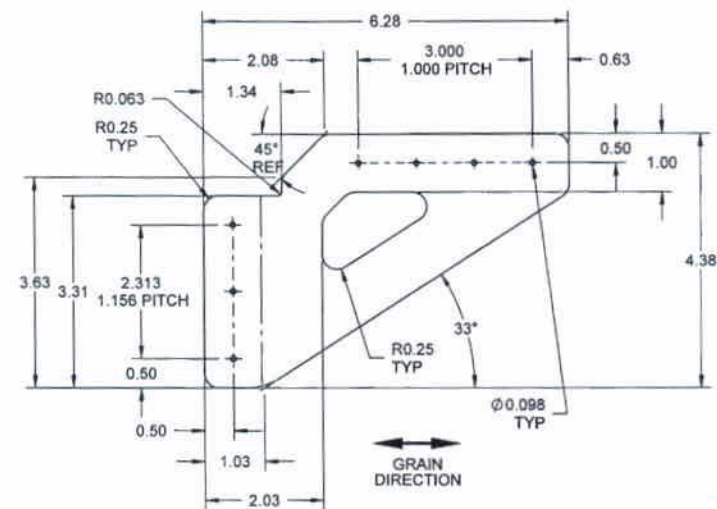
Measured by: 1B	Audited by: S	Prototype Approval:	N/A
Date: 10-9-13	Date: 10/09/13	Date:	N/A
inspected to Part Draw only		Revised by	Approved
Rev	Date	Change	
A		New Issue	KJ/JLM



D4180-2 GUSSET
MAKE FROM D4180-1F



D4180-1 GUSSET
MAKE FROM D4180-1F



D4180-1F GUSSET FLAT PATTERN

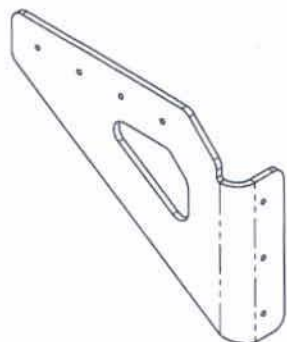
61924

RELEASED
2010-09-29

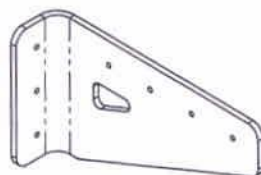
NOTES:

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF. DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.19 lbs EACH

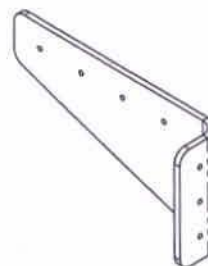
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4180	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		POD FRAME GUSSETS	NTS
DATE	10.09.03	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCIALIZED TO ANY OTHER PERSON OR ENTITY WITHOUT PERMISSION FROM DART AEROSPACE LTD.			



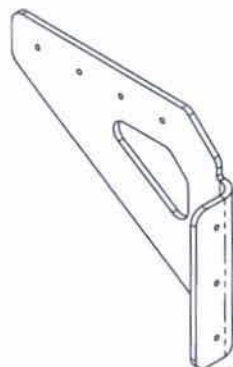
D4180-1 GUSSET



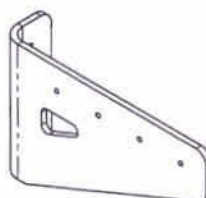
D4180-3 GUSSET



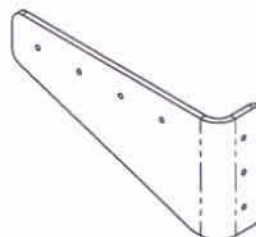
D4180-5 GUSSET



D4180-2 GUSSET



D4180-4 GUSSET



D4180-6 GUSSET

RELEASED
2010-09-29

A	NEW ISSUE	MB	10.09.03
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.09.03		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D4180
REV. A
SHEET 1 OF 4
TITLE
POD FRAME GUSSETS
SCALE
NTS

COPYRIGHT © 2010 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT PERMISSION FROM DART AEROSPACE LTD.